

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method according to claim 14, comprising:

identifying the alternative reference picture for the current picture or said part of ~~the a~~ current picture by comparing the local default reference picture with a further reference picture to calculate a measure of similarity between the two;

comparing the measure of similarity against a pre-determined similarity criterion; and
generating the indicator based on the comparison.

2. (Currently amended) A method according to claim 14, comprising:

forming a motion compensated prediction ~~[[of]]~~ for at least part of the current picture from a first local default reference picture and a second local default reference picture, the first local default reference picture corresponding to a picture of the sequence occurring temporally before the current picture and the second local default reference picture corresponding to a picture of the sequence occurring temporally after the current picture;

comparing the first local default reference picture with a further reference picture corresponding to a picture of the sequence occurring temporally before the current picture to calculate a measure of similarity between the two;

comparing the measure of similarity against a pre-determined similarity criterion; and
generating the indicator based on the comparison.

3. (Canceled).

4. (Currently amended) A method according to claim 1, comprising:

identifying more than one alternative reference picture for the current picture or respectively for said part of ~~the a~~ current picture by comparing the local default reference picture with a plurality of further reference pictures to calculate respective measures of similarity; and

~~outputting~~ providing an indicator for each further reference picture that meets the predetermined similarity criterion to provide more than one indicator for the current picture or respectively for said part of ~~the a~~ current picture.

5. (Currently amended) A method according to claim 14, comprising ~~including~~ providing the indicator in a picture header of ~~[[an]]~~ the encoded video signal.

6. (Currently amended) A method according to claim 14, comprising encoding the sequence of pictures according to the H.263 video compression standard and ~~including~~ providing the indicator in the Supplemental Enhancement Information in accordance with the H.263 video compression standard.

7-8. (Canceled).

9. (Currently amended) A method of operating an apparatus for decoding an encoded video signal representing a sequence of pictures, the method comprising:

~~receiving a part of the encoded video signal representing a current picture of the sequence or a part of the current picture;~~

determining that a default reference picture, ~~to be used in obtaining a~~ for use in forming a motion compensated prediction for the a current picture or ~~said a part of the a~~ current picture, cannot be reconstructed;

examining an indicator provided for error concealment of the current picture or respectively for said part of the a current picture to identify , ~~the indicator identifying that an alternative reference picture is to be used for use in forming a motion compensated prediction of for the current picture or~~ respectively for said part of the a current picture; and

using the alternative reference picture, instead of the default reference picture, to provide form a motion compensated prediction for the current picture or respectively for said part of the a current picture in response to determining that the default reference picture cannot be reconstructed, thereby providing error concealment for the current picture or respectively for said part of a current picture.

10. (Currently amended) ~~An A-video~~ encoder for encoding a video signal to form an encoded video signal, the video signal representing a sequence of pictures, wherein the ~~video~~ encoder is ~~arranged configured~~ to:

obtain a local default reference picture by encoding and decoding a picture of the sequence;

~~obtain~~ form a motion compensated prediction for a current picture of the sequence or

a part of ~~the a~~ current picture ~~from a~~ using the local default reference picture;

generate an indicator for use in error concealment of the current picture or a respectively for said part of the a current picture, the indicator configured to identify ~~identifying~~ an alternative reference picture, which is sufficiently similar to the local default reference picture so that it can be used in a corresponding decoding process, instead of a corresponding default reference picture, in forming a motion compensated ~~for~~ prediction ~~of~~ for the current picture or respectively for said part of the a current picture when ~~a remote the~~ corresponding default reference picture corresponding to the local default reference picture cannot be reconstructed in ~~a subsequent remote the~~ corresponding decoding process; and ~~transmit provide~~ the indicator for use in the ~~subsequent remote corresponding~~ decoding process to identify the alternative reference picture for use in error concealment ~~when decoding the current picture or said part of the current picture.~~

11. (Currently amended) A ~~video~~ decoder for decoding an encoded video signal representing a sequence of pictures, wherein the ~~video~~ decoder is ~~arranged~~ configured to:

~~receive a part of the encoded video signal representing a current picture of the sequence or a part of the current picture;~~

determine that a default reference picture, ~~to be used for use in obtaining~~ forming a motion compensated prediction for ~~the a~~ current picture or ~~said a part of the a~~ current picture, cannot be reconstructed;

examine an indicator provided for error concealment of the current picture or respectively for said part of the a current picture, ~~the indicator identifying that~~ to identify an alternative reference picture ~~is to be used for use in forming a motion compensated~~ prediction ~~of~~ for the current picture or respectively for said part of the a current picture; and

use the alternative reference picture, instead of the default reference picture, to provide form a motion compensated prediction for the current picture or respectively for said part of the a current picture in response to determining that the default reference picture cannot be reconstructed, thereby providing error concealment for the current picture or respectively for said part of a current picture.

12. (Currently amended) A radio telecommunications device comprising ~~a video~~ an encoder for encoding a video signal to form an encoded video signal, the video signal representing a

sequence of pictures, wherein the ~~video~~-encoder is ~~arranged~~ configured to:

obtain a local default reference picture by encoding and decoding a picture of the sequence;

~~obtain~~ form a motion compensated prediction for a current picture of the sequence or a part of ~~the~~ a current picture from ~~a~~ the local default reference picture;

generate an indicator for use in error concealment of the current picture or respectively for said part of ~~the~~ a current picture, the indicator configured to identify ~~identifying~~ an alternative reference picture, which is sufficiently similar to the local default reference picture so that it can be used in a corresponding decoding process, instead of a corresponding default reference picture, in forming a motion compensated ~~for~~ prediction ~~of~~ for the current picture or respectively for said part of ~~the~~ a current picture when ~~a remote~~ the corresponding default reference picture ~~corresponding to the local default reference picture~~ cannot be reconstructed in ~~a subsequent remote~~ the corresponding decoding process; and

~~transmit~~ provide the indicator for use in the ~~subsequent remote~~ corresponding decoding process to identify the alternative reference picture for use in error concealment when decoding the current picture or said part of the current picture.

13. (Canceled).

14. (Currently amended) A method of operating an apparatus for encoding a video signal to form an encoded video signal, the video signal representing a sequence of pictures, the method comprising:

obtaining a local default reference picture by encoding and decoding a picture of the sequence;

~~obtaining~~ forming a motion compensated prediction for a current picture of the sequence or a part of ~~the~~ a current picture from ~~[[a]]~~ the local default reference picture;

generating an indicator for use in error concealment of the current picture or respectively for said ~~[[a]]~~ part of ~~the~~ a current picture, the indicator configured to identify ~~identifying~~ an alternative reference picture, which is sufficiently similar to the local default reference picture so that it can be used in a corresponding decoding process, instead of a corresponding default reference picture, in forming a motion compensated ~~for~~ prediction ~~of~~ for the current picture or respectively for said part of ~~the~~ a current picture when ~~a remote~~ the

~~corresponding~~ default reference picture ~~corresponding to the local default reference picture~~ cannot be reconstructed in ~~a subsequent remote~~ the corresponding decoding process; and ~~transmitting~~ providing the indicator for use in the ~~subsequent remote~~ corresponding decoding process to identify the alternative reference picture for use in error concealment ~~when decoding the current picture or said part of the current picture.~~

15. (Currently amended) A method according to claim 14, comprising ~~including~~ providing the indicator in one of a picture segment header or a macroblock header of ~~[[an]]~~ the encoded video signal when the indicator is associated with a part of ~~the a~~ a current picture.

16. (Currently amended) A method according to claim 14, comprising generating the indicator to indicate ~~the one of~~ a temporal reference of the alternative reference picture or a picture number of the alternative reference picture.

17. (Currently amended) A method according to claim 14, comprising ~~indicating~~ providing respective indicators to indicate corresponding alternative reference pictures for B pictures and P pictures.

18. (Currently amended) A method according to claim 14, comprising providing indicators to indicate ~~indicating~~ alternative reference pictures only for P pictures.

19. (Currently amended) A method according to claim 1, comprising calculating the measure of similarity as a sum of absolute differences using differences in pixel values between the local default reference picture and ~~[[a]]~~ the further reference picture.

20. (Currently amended) A method according to claim 1, comprising ~~assessing~~ calculating the measure of similarity between the local default reference picture and ~~[[a]]~~ the further reference picture using picture histograms.

21. (Currently amended) A method according to claim 14, comprising scalably encoding the video signal and providing respective indicators to indicate corresponding ~~indicating~~ alternative reference pictures for predictively encoded enhancement layer pictures of the scalably encoded video signal.

22. (Currently amended) A method according to claim 14, comprising providing the indicator with the current picture or respectively with said part of ~~the~~ a current picture.

23. (Canceled).

24. (Currently amended) A method according to claim 9, comprising:

examining a ranking order of more than one indicator provided for the current picture or respectively for said part of ~~the~~ a current picture; ~~and~~

selecting an indicator based on the ranking order; and

using the alternative reference picture identified by the selected indicator to form a motion compensated prediction for the current picture or respectively for said part of a current picture.

25. (Previously presented) A method according to claim 9, comprising obtaining the indicator from a picture header of the encoded video signal.

26. (Currently amended) A method according to claim 9, comprising obtaining the indicator from one of a picture segment header or a macroblock header of the encoded video signal.

27. (Previously presented) A method according to claim 9, comprising obtaining the indicator from Supplemental Enhancement Information of an encoded video signal encoded according to the H.263 video compression standard.

28. (Currently amended) A method according to claim 9, comprising using the indicator to identify one of a ~~the~~ temporal reference of the alternative reference picture or a picture number of the alternative reference picture.

29. (Currently amended) A method according to claim 9, comprising using ~~the respective~~ indicators to identify corresponding alternative reference pictures for B pictures and P pictures.

30. (Canceled).

31. (Currently amended) A method according to claim 9, comprising using ~~the respective~~ indicators to identify corresponding alternative reference pictures for predictively encoded enhancement layer pictures of a scalably encoded video signal.

32. (Currently amended) ~~An video~~-encoder according to claim 10, wherein the ~~video~~-encoder is ~~arranged-configured~~ to:

identify the alternative reference picture for the current picture or said part of ~~the a~~ current picture by comparing the local default reference picture with a further reference picture to calculate a measure of similarity between the two;

compare the measure of similarity against a pre-determined similarity criterion; and
generate the indicator based on the comparison.

33. (Currently amended) ~~An video~~-encoder according to claim 10, wherein the ~~video~~-encoder is ~~arranged-configured~~ to:

form a motion compensated prediction ~~of for~~ at least part of ~~the a~~ current picture from a first local default reference picture and a second local default reference picture, the first local default reference picture corresponding to a picture of the sequence occurring temporally before the current picture and the second local default reference picture corresponding to a picture of the sequence occurring temporally after the current picture;

compare the first local default reference picture with a further reference picture corresponding to a picture of the sequence occurring temporally before the current picture to calculate a measure of similarity between the two;

comparing the measure of similarity against a predetermined similarity criterion; and
generate the indicator based on the comparison.

34. (Canceled).

35. (Currently amended) ~~An A-video~~-encoder according to claim 32, wherein the ~~video~~ encoder is ~~arranged-configured~~ to:

identify more than one alternative reference picture for the current picture or respectively for said part of ~~the a~~ current picture by comparing the local default reference picture with a plurality of further reference pictures to calculate respective measures of similarity; and

~~output~~provide an indicator for each further reference picture that meets ~~the a~~ predetermined similarity criterion to provide more than one indicator for the current picture or respectively for said part of ~~the a~~ current picture.

36. (Currently amended) ~~An A-video~~ encoder according to claim 10, wherein the ~~video~~ encoder is ~~arranged-configured~~ to include-provide the indicator in a picture header of the encoded video signal.

37. (Currently amended) ~~An A-video~~ encoder according to claim 10, wherein the ~~video~~ encoder is ~~arranged-configured~~ to include-provide the indicator in one of a picture segment header or a macroblock header of the encoded video signal when the indicator is associated with a part of ~~the a~~ current picture.

38. (Currently amended) ~~An A-video~~ encoder according to claim 10, wherein the ~~video~~ encoder is ~~arranged-configured~~ to encode the video signal according to the H.263 video compression standard and to include-provide the indicator in the Supplemental Enhancement Information in accordance with the H.263 video compression standard.

39. (Currently amended) ~~An A-video~~ encoder according to claim 10, wherein the ~~video~~ encoder is ~~arranged-configured~~ to generate the indicator to indicate one of a ~~by using the~~ temporal reference of the alternative reference picture or a picture number of the alternative reference picture.

40. (Currently amended) ~~An A-video~~ encoder according to claim 10, wherein the ~~video~~ encoder is ~~arranged-configured~~ to provide respective indicators to indicate corresponding alternative reference pictures for B pictures and P pictures.

41. (Currently amended) ~~An A-video~~ encoder according to claim 10, wherein the ~~video~~ encoder is ~~arranged-configured~~ to provide indicators to indicate alternative reference pictures only for P pictures.

42. (Currently amended) ~~An A-video~~ encoder according to claim 32, wherein the ~~video~~ encoder is ~~arranged-configured~~ to calculate the measure of similarity as a sum of absolute

differences using differences in pixel values between the local default reference picture and [[a]] the further reference picture.

43. (Currently amended) ~~An A-video~~ encoder according to claim 32, wherein the ~~video~~ encoder is ~~arranged-configured~~ to ~~assess-calculate~~ the measure of similarity between the local default reference picture and [[a]] the further reference picture using picture histograms.

44. (Currently amended) ~~An A-video~~ encoder according to claim 10, wherein the ~~video~~ encoder is ~~arranged-configured~~ to encode the video signal as a scalable video sequence and to provide respective indicators to indicate corresponding alternative reference pictures for predictively encoded enhancement layer pictures of the scalable video sequence.

45. (Currently amended) ~~An A-video~~ encoder according to claim 10, wherein the ~~video~~ encoder is ~~arranged-configured~~ to provide the indicator with the current picture or respectively with said part of ~~the a~~ current picture.

46. (Canceled).

47. (Currently amended) A ~~video~~ decoder according to claim 11, wherein the ~~video~~ decoder is ~~arranged-configured~~ to:

examine a ranking order of more than one indicator provided for the current picture or respectively for said part of ~~the a~~ current picture; and

select an indicator based on the ranking order; and

use the alternative reference picture identified by the selected indicator to form a motion compensated prediction for the current picture or respectively for said part of a current picture.

48. (Currently amended) A ~~video~~ decoder according to claim 11, wherein the ~~video~~ decoder is ~~arranged-configured~~ to obtain the indicator from a picture header of the encoded video signal.

49. (Currently amended) A ~~video~~ decoder according to claim 11, wherein the ~~video~~ decoder is ~~arranged-configured~~ to obtain the indicator from one of a picture segment header or a macroblock header of the encoded video signal.

50. (Currently amended) A ~~video~~-decoder according to claim 11, wherein the ~~video~~-decoder is ~~arranged-configured~~ to obtain the indicator from Supplemental Enhancement Information of an encoded video signal encoded according to the H.263 video compression standard.

51. (Currently amended) A ~~video~~-decoder according to claim 11, wherein the ~~video~~-decoder is ~~arranged-configured~~ to use the indicator to identify one of a ~~the~~ temporal reference of the alternative reference picture or a picture number of the alternative reference picture.

52. (Currently amended) A ~~video~~-decoder according to claim 11, wherein the ~~video~~-decoder is ~~arranged-configured~~ to use ~~the respective~~ indicators to identify corresponding alternative reference pictures for predictively encoded enhancement layer pictures of a scalably encoded video signal.

53. (Currently amended) A multimedia terminal device comprising an ~~video~~-encoder for encoding a video signal to form an encoded video signal, the video signal representing a sequence of pictures, wherein the ~~video~~-encoder is ~~arranged-configured~~ to:

obtain a local default reference picture by encoding and decoding a picture of the sequence;

~~obtain-form~~ a motion compensated prediction for a current picture of the sequence or a part of ~~the-a~~ current picture from ~~[[a]]~~ the local default reference picture;

generate an indicator for use in error concealment of the current picture or ~~[[a]]~~ respectively for said part of the-a current picture, the indicator configured to identify ~~identifying~~ an alternative reference picture, which is sufficiently similar to the local default reference picture so that it can be used in a corresponding decoding process, instead of a corresponding default reference picture, in forming a motion compensated-for prediction of ~~for~~ the current picture or respectively for said part of the-a current picture when ~~a remote-the~~ corresponding default reference picture corresponding to the local default reference picture cannot be reconstructed in a subsequent remote-the corresponding decoding process; and

~~transmit-provide~~ the indicator for use in the subsequent remote-corresponding decoding process to identify the alternative reference picture for use in error concealment ~~when decoding the current picture or said part of the current picture.~~

54-63. (Canceled).

64. (Currently amended) A method according to claim 14, comprising identifying the alternative reference picture for the current picture or said part of the current picture by comparing the current picture with a reference picture to calculate a measure of similarity between the two, comparing the measure of similarity against a pre-determined similarity criterion, and generating the indicator based on the comparison.

65. (Currently amended) A method according to claim 4, comprising ranking the further reference pictures based on said comparison and providing said more than one indicator for the current picture or respectively for said part of the a current picture in a ranking order, the indicator associated with the further reference picture having the closest similarity to the local default reference picture being placed first in the ranking order.

66. (Currently amended) A radio telecommunications device comprising a ~~video~~ decoder for decoding an encoded video signal representing a sequence of pictures, wherein the ~~video~~ decoder is arranged-configured to:

~~receive a part of the encoded video signal representing a current picture of the sequence or a part of the current picture;~~

determine that a default reference picture, ~~to be for used in obtaining-forming~~ a motion compensated prediction for the a current picture or said a part of the a current picture, cannot be reconstructed;

examine an indicator provided for error concealment of the current picture or respectively for said part of the a current picture, ~~the indicator identifying that to identify an alternative reference picture is to be used for use in forming a motion compensated prediction~~ [[of]] for the current picture or respectively for said part of the a current picture; and

use the alternative reference picture, instead of the default reference picture, to ~~provide-form~~ a motion compensated prediction for the current picture or respectively for said part of the a current picture in response to determining that the default reference picture cannot be reconstructed, thereby providing error concealment for the current picture or respectively for said part of a current picture.

67. (Currently amended) An ~~video~~ encoder according to claim 35, wherein the encoder is configured to rank the further reference pictures based on said comparison that meet the

~~predetermined criterion~~ and to provide ~~their associated indicators~~ said more than one indicator with for the current picture or respectively for said part of ~~the a~~ current picture in a ranking order, the indicator associated with the further reference picture having the closest similarity to the local default reference picture being placed first in the ranking order.

68. (Currently amended) A multimedia terminal device comprising a ~~video~~ decoder for decoding an encoded video signal representing a sequence of pictures, wherein the ~~video~~ decoder is ~~arranged~~ configured to:

~~receive a part of the encoded video signal representing a current picture of the sequence or a part of the current picture;~~

determine that a default reference picture, ~~to be used in obtaining~~ for use in forming a motion compensated prediction for the a current picture or said a part of the a current picture, cannot be reconstructed;

examine an indicator provided for error concealment of the current picture or respectively for said part of ~~the a~~ current picture to identify, ~~the indicator identifying that an alternative reference picture is to be used for use in forming a motion compensated prediction~~ [[of]] for the current picture or respectively for said part of ~~the a~~ current picture; and

use the alternative reference picture, instead of the default reference picture, to ~~provide form a motion compensated prediction for the current picture or respectively for~~ said part of ~~the a~~ current picture in response to determining that the default reference picture cannot be reconstructed, thereby providing error concealment for the current picture or respectively for said part of a current picture.

69. (Currently amended) An apparatus for encoding a video signal to form an encoded video signal, the video signal representing a sequence of pictures, wherein the apparatus is ~~arranged~~ configured to:

obtain a local default reference picture by encoding and decoding a picture of the sequence;

~~obtain form~~ a motion compensated prediction for a current picture of the sequence or a part of the a current picture from [[a]] the local default reference picture;

generate an indicator for use in error concealment of the current picture or [[a]] respectively for said part of the a current picture, the indicator configured to identify

~~identifying~~ an alternative reference picture, which is sufficiently similar to the local default reference picture so that it can be used in a corresponding decoding process, instead of a corresponding default reference picture, in forming a motion compensated ~~for~~ prediction ~~[[of]]~~ for the current picture or respectively for said part of ~~the a~~ current picture when a ~~remote~~ the corresponding default reference picture ~~corresponding to the local default reference picture cannot be reconstructed in a subsequent remote~~ the corresponding decoding process; and

~~transmit~~ provide the indicator for use in the ~~subsequent remote~~ corresponding decoding process to identify the alternative reference picture for use in error concealment when decoding the current picture or said part of the current picture.

70. (Currently amended) An apparatus for decoding an encoded video signal representing a sequence of pictures, wherein the apparatus is ~~arranged~~ configured to:

~~receive a part of the encoded video signal representing a current picture of the sequence or a part of the current picture;~~

determine that a default reference picture, ~~to be for~~ used in obtaining ~~forming~~ a motion compensated prediction for ~~the a~~ current picture or ~~said a~~ part of ~~the a~~ current picture, cannot be reconstructed;

examine an indicator provided for error concealment of the current picture or respectively for said part of ~~the a~~ current picture to identify ~~the indicator identifying that an alternative reference picture is to be used for use in forming a motion compensated prediction~~ ~~[[of]]~~ for the current picture or respectively for said part of ~~the a~~ current picture; and

use the alternative reference picture, instead of the default reference picture, to ~~provide~~ form a motion compensated prediction for the current picture or respectively for said part of ~~the a~~ current picture in response to determining that the default reference picture cannot be reconstructed, thereby providing error concealment for the current picture or respectively for said part of a current picture.